THE MINERAL INDUSTRY OF

IRELAND

By Harold Newman

Ireland remained as one of Europe's major producers of zinc and a significant producer of alumina, lead, and peat in 1995. The country continued its significance in the European Union as a producer of mined lead and zinc. Although the range of minerals exploited in the country has been limited, exploration activity continued to increase, mainly emphasizing gold, lead, and zinc. The country's mineral processing industry was relatively small, as was the demand and consumption of mineral resources.

Ireland's base-metals production, centered mainly on Outokumpu Oy's Tara zinc-lead mine near Navan, County Meath, remained consistent along with industrial mineral production, including barite and gypsum. Several metals and industrial minerals projects were awaiting the granting of planning permission and mining leases before moving into development and production. Natural gas production continued off the southern coast of Ireland, near Cork. Reserves were not disclosed, and production from the fields was being carefully managed to extend the life of the area. (See table 1.)

The Geological Survey of Ireland (GSI) was responsible for the development of mineral information and for technical management of the state mineral licensing and leasing system. GSI also provided technical assistance to the exploration and mining industry.

Ireland was considered to have a geologic potential for a variety of minerals. Interest in gold exploration was ongoing, thus providing the impetus for the revitalization of the exploration sector within the past few years. (See table 2.)

Aughinish Alumina Ltd.'s (AAL) production of alumina was based on imports of bauxite from the Republic of Guinea. A secondary source is Brazil.

The major market for AAL's alumina is primary aluminum smelters. British Alcan Aluminium PLC has been purchasing 65% of the refinery's output for its smelter in the United Kingdom. The remaining 35% was purchased by Billiton Aluminium Ireland Ltd. for its smelter in Norway.

Most gold exploration activity appeared to be focused on four areas that are known to contain significant mineralization. All the areas are in the Caledonies. Two areas are in the eastern part; one area in the western part; and the other area in the southern part.

A major upswing in activity in the lead and zinc sector was expected in Ireland. The country's output of zinc could double by the second half of the 1990's if the development of

two new mines continues as planned. Several other potential projects also were under investigation at yearend.

The Tara Mine, at Navan, was one of the largest lead-zinc producers in Europe. Arcon International Resources PLC was proceeding with plans to develop its Galmoy deposit in County Kilkenny after receiving planning permission from the Kilkenny County Council.

A joint-venture lead-zinc project involving Ivernia West PLC and Minorco Lisheen Ltd. was continuing. Minorco Lisheen holds a 50% interest in the project and are the managers of the project. Applications for Planning Permission, Pollution Control License, and a State Mining Lease have been made for the Lisheen Mine development. Lisheen is on the same Rathdowney geologic trend as Arcon's Galmoy project, 8 kilometers (km) away in County Kilkinney.

Ireland produced significant quantities of synthetic diamonds. Output was not quantitatively reported, and information was not available to make reliable estimates of production. The two companies that manufacture industrial diamonds and super abrasives are De Beers Industrial Diamonds Div. (Ireland), a subsidiary of De Beers Consolidated Mines (Pty.) Ltd. of South Africa, and GE Superabrasives Ireland, a subsidiary of General Electric Co. of the United States.

A range of abrasives was produced from synthetic diamond, cubic boron nitride, and polycrystalline diamond (PCD). Trade names for the PCD products are Syndie for wire drawing blanks, Syndrill for rock cutting blanks, and Syndite for cutting tools and wear-resistant parts. All production was for the export market.

A hydrocarbon licensing round requesting bids covering acreage in the Erri and Slyne Troughs off the northwest Irish coast was completed. New incentives included abolition of royalties, the tax on profits reduced to 25%, and a 25-year retroactive exploration incentive, allowing all exploration costs incurred in Ireland during the last 25 years to be offset against future production.

Ireland has a good network of roads supplemented by a Government-owned railroad. Two deepwater ports at Cork and Dublin are supplemented by 10 secondary ports. Most mine sites are easily accessible and no more than 600 km from either deepwater port.

The mineral industry is expected to utilize the opportunities created by the boom in gold and lead-zinc

exploration and renewed interest from multinational companies to continue mineral developments.

GSI has an active data collection program through mapping and resource-related studies and offers technical

assistance. This should continue to be a significant benefit and encouragement to companies engaged in mineral-resource activities.

TABLE 1
IRELAND: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity	1991	1992	1993	1994	1995 e/
METALS					
Alumina	981	973	1,100	1,000	1,000
Iron and steel, steel, crude	307	257	326	266	310
Lead:					
Mine output, Pb content	40,200	42,900	48,400	53,700	46,100 2/
Metal, refined, secondary	11,600	12,000	12,000	10,000	10,400 2/
Silver, mine output, Ag content kilograms	10,500	13,100	13,000	17,400	15,000
Zinc, mine output, Zn content	188,000	195,000	194,000	195,000	184,100 2/
INDUSTRIAL MINERALS 3/					
Barite	94	70	53		
Cement, hydraulic e/	1,600	1,600	1,600	1,550	1,500
Gypsum	342 e/	343 e/	318	325	350
Lime e/	110,000	110,000	100,000	100,000	110,000
Nitrogen, N content of ammonia	429	384 e/	367	380	375
Sand and gravel e/ 4/	7,000	7,000	7,500	7,800	7,500
Stone and other quarry products: e/					
Limestone	8,500	9,000	8,500	9,000	9,000
Other 5/	2,000	2,000	2,000	2,000	2,000
MINERAL FUELS AND RELATED MATERIALS					
Coal, anthracite and bituminous	6	2	1	1	1
Gas, natural: Marketed million cubic meters	56	56 e/	58	55	60
Peat:					
For horticultural use	249	300 e/	300 e/	250	300
For fuel use: e/					
Sod peat 6/	1,000	1,200	1,000	1,200	1,200
Milled peat 7/	3,770	5,000	5,500	5,000	5,000
Total	4,770	6,200	6,500	6,200	6,200
Peat briquets e/	400	400	400	400	400
Petroleum refinery products: 8/					
Liquefied petroleum gas thousand 42-gallon barrels	350	417	325	360	350
Naphtha do.	400	349	350	350	350
Gasoline, motor do.	3,000	3,070	3,120	3,000	3,000
Distillate fuel oil do.	4,500	5,000 e/	5,000	5,000	5,000
Residual fuel oil do.	4,000	4,580 e/	4,540	5,470	5,500
Refinery fuel and losses do.	400	375 e/	400	400	400
Total e/ do.	12,650	13,791 e/	13,735	14,580	14,600
-/E-timeted					

e/ Estimated.

 ${\it TABLE~2}$ IRELAND: STRUCTURE OF THE MINERAL INDUSTRY FOR 1995

(Thousand metric tons unless otherwise specified)

		Major operating companies	Location of	Annual
Com	modity	and major equity owners	main facility	capacity
Alumina		Aughinish Alumina Ltd.	Aughinish Island, County Limerick	800
Barite		Magobar Ireland Ltd.	Silvermines, County Tipperary	240
Cement		Irish Cement Ltd.	Plants in Limerick and Platin	2,000
Lead-zinc		Outokumpu Oy	Tara Mine, Navan, County Meath	215
Natural gas	million cubic feet	Marathon Oil Co.	Kinsale Head Field, Celtic Sea	75,000
Peat		Bord Na Mona (Government Peat Board)	Production mainly in midlands	4,200
Petroleum, refined	barrels per day	Irish Refining Co.	Whitegate, near Cork	56,000
Steel		Irish Steel Ltd.	Haulbowline, near Cork	350

^{1/} Table includes data available through Apr. 1996.

^{2/} Reported figure.

^{3/} Ireland also produces significant quantities of synthetic diamond and is the major supplier to the United States. However, output is not quantitatively reported and general information is inadequate to make reliable estimates of output levels.

^{4/} Excludes output by local authorities and road contractors.

^{5/} Includes clays for cement production, fire clay, granite, marble, rock sand, silica rock, and slate.

^{6/} Includes production by farmers and by Bord Na Mona.

^{7/} Includes milled peat used for briquet production.

^{8/} From imported crude oil.